

# SEQUENCE LISTING

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 HYTONEN, VESA PEKKA  
 KULOMAA, MARKKU SAKARI

<120> AVIDIN MUTANTS

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<140> 10/579,393

<141> 2006-05-15

<150> PCT/FI04/000679

<151> 2004-11-15

<150> FI 20031663

<151> 2003-11-14

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<170> PatentIn Ver. 3.3

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<213> Gallus gallus

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 35 40 45

Ser Arg Gly Glu Phe Thr Gly Thr Tyr Ile Thr Ala Val Thr Ala Thr  
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Ser Asn Glu Ile Lys Glu Ser Pro Leu His Gly Thr Gln Asn Thr Ile  
 65 70 75 80

Asn Lys Arg Thr Gln Pro Thr Phe Gly Phe Thr Val Asn Trp Lys Phe  
 85 90 95

Ser Glu Ser Thr Thr Val Phe Thr Gly Gln Cys Phe Ile Asp Arg Asn  
 100 105 110

Gly Lys Glu Val Leu Lys Thr Met Trp Leu Leu Arg Ser Ser Val Asn  
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35 40 45

Thr Gly Gln Cys Phe Ile Asp Arg Asn Gly Lys Glu Val Leu Lys Thr  
50 55 60

Met Trp Leu Leu Arg Ser Ser Val Asn Asp Ile Gly Asp Asp Trp Lys  
65 70 75 80

Ala Thr Arg Val Gly Ile Asn Ile Phe Thr Arg Leu Arg Thr Gln Lys  
85 90 95

Glu Gly Gly Ser Gly Gly Ser Ala Arg Lys Cys Ser Leu Thr Gly Lys  
100 105 110

Trp Thr Asn Asp Leu Gly Ser Asn Met Thr Ile Gly Ala Val Asn Ser  
115 120 125

Arg Gly Glu Phe Thr Gly Thr Tyr Ile Thr Ala Val Thr Ala Thr Ser  
130 135 140

Asn Glu Ile Lys Glu Ser Pro Leu His Gly Thr Gln Asn Thr Ile Asn  
145 150 155 160

Lys Ser Gly Gly Ser Thr Thr Val Phe Thr Gly Gln Cys Phe Ile Asp  
165 170 175

Arg Asn Gly Lys Glu Val Leu Lys Thr Met Trp Leu Leu Arg Ser Ser  
180 185 190

Val Asn Asp Ile Gly Asp Asp Trp Lys Ala Thr Arg Val Gly Ile Asn  
195 200 205

Ile Phe Thr Arg Leu Arg Thr Gln Lys Glu Gly Gly Ser Gly Gly Ser  
210 215 220

Ala Arg Lys Cys Ser Leu Thr Gly Lys Trp Thr Asn Asp Leu Gly Ser  
225 230 235 240

Asn Met Thr Ile Gly Ala Val Asn Ser Arg Gly Glu Phe Thr Gly Thr  
245 250 255

Tyr Ile Thr Ala Val Thr Ala Thr Ser Asn Glu Ile Lys Glu Ser Pro  
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<400> 24

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| Met | Val | His | Ala | Thr | Ser | Pro | Leu | Leu | Leu | Leu | Leu | Leu | Ser | Leu |     |
| 1   |     |     |     | 5   |     |     |     |     | 10  |     |     |     | 15  |     |     |
| Ala | Leu | Val | Ala | Pro | Gly | Leu | Ser | Ala | Arg | Lys | Arg | Thr | Gln | Pro | Thr |
|     |     | 20  |     |     |     |     |     | 25  |     |     |     |     | 30  |     |     |
| Phe | Gly | Phe | Thr | Val | Asn | Trp | Lys | Phe | Ser | Glu | Ser | Thr | Thr | Val | Phe |
|     |     | 35  |     |     |     |     | 40  |     |     |     |     | 45  |     |     |     |
| Thr | Gly | Gln | Cys | Phe | Ile | Asp | Arg | Asn | Gly | Lys | Glu | Val | Leu | Lys | Thr |
|     | 50  |     |     |     |     | 55  |     |     |     |     | 60  |     |     |     |     |
| Met | Trp | Leu | Leu | Arg | Ser | Ser | Val | Asn | Asp | Ile | Gly | Asp | Asp | Trp | Lys |
| 65  |     |     |     |     | 70  |     |     |     |     | 75  |     |     |     |     | 80  |
| Ala | Thr | Arg | Val | Gly | Ile | Asn | Ile | Phe | Thr | Arg | Leu | Arg | Thr | Gln | Lys |
|     |     |     | 85  |     |     |     |     |     | 90  |     |     |     |     | 95  |     |
| Glu | Gly | Gly | Ser | Gly | Gly | Ser | Ala | Arg | Lys | Cys | Ser | Leu | Thr | Gly | Lys |
|     |     |     | 100 |     |     |     |     | 105 |     |     |     |     | 110 |     |     |
| Trp | Thr | Asn | Asp | Leu | Gly | Ser | Asn | Met | Thr | Ile | Gly | Ala | Val | Asn | Ser |
|     |     | 115 |     |     |     |     | 120 |     |     |     |     | 125 |     |     |     |
| Arg | Gly | Glu | Phe | Thr | Gly | Thr | Tyr | Ile | Thr | Ala | Val | Thr | Ala | Thr | Ser |
|     | 130 |     |     |     |     | 135 |     |     |     |     | 140 |     |     |     |     |
| Asn | Glu | Ile | Lys | Glu | Ser | Pro | Leu | His | Gly | Thr | Gln | Asn | Thr | Ile | Asn |
| 145 |     |     |     |     | 150 |     |     |     |     | 155 |     |     |     |     | 160 |
| Lys | Ser | Gly | Gly | Ser | Thr | Thr | Val | Phe | Thr | Gly | Gln | Cys | Phe | Ile | Asp |
|     |     |     |     | 165 |     |     |     |     | 170 |     |     |     |     | 175 |     |
| Arg | Asn | Gly | Lys | Glu | Val | Leu | Lys | Thr | Met | Trp | Leu | Leu | Arg | Ser | Ser |
|     |     |     | 180 |     |     |     |     | 185 |     |     |     |     | 190 |     |     |
| Val | Asn | Asp | Ile | Gly | Asp | Asp | Trp | Lys | Ala | Thr | Arg | Val | Gly | Ile | Asn |
|     |     | 195 |     |     |     |     | 200 |     |     |     |     | 205 |     |     |     |
| Ile | Phe | Thr | Arg | Leu | Arg | Thr | Gln | Lys | Glu | Gly | Gly | Ser | Gly | Gly | Ser |
|     | 210 |     |     |     |     | 215 |     |     |     |     | 220 |     |     |     |     |
| Ala | Arg | Lys | Cys | Ser | Leu | Thr | Gly | Lys | Trp | Thr | Asn | Asp | Leu | Gly | Ser |
| 225 |     |     |     |     | 230 |     |     |     |     | 235 |     |     |     |     | 240 |
| Asn | Met | Thr | Ile | Gly | Ala | Val | Asn | Ser | Arg | Gly | Glu | Phe | Thr | Gly | Thr |
|     |     |     | 245 |     |     |     |     |     | 250 |     |     |     |     | 255 |     |
| Tyr | Ile | Thr | Ala | Val | Thr | Ala | Thr | Ser | Asn | Glu | Ile | Lys | Glu | Ser | Pro |
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Leu His Gly Thr Gln Asn Thr Ile Asn Lys Arg Thr Gln Pro Thr Phe  
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 Ser Gly Ser Gly Ser Gly Arg Thr Gln Pro Thr Phe Gly Phe Thr Val  
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 Asn Trp Lys Phe Ser Gly Ser Thr Thr Val Phe Thr Gly Gln Cys Phe  
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 Ile Asp Arg Asn Gly Lys Glu Val Leu Lys Thr Met Trp Leu Arg  
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 Ser Ser Val Asn Asp Ile Gly Asp Asp Trp Lys Ala Thr Arg Val Gly  
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 Gly Ser Ala Arg Lys Cys Ser Leu Thr Gly Lys Trp Thr Asn Asp Leu  
 385 390 395 400  
 Gly Ser Asn Met Thr Ile Gly Ala Val Asn Ser Arg Gly Glu Phe Thr  
 405 410 415  
 Gly Thr Tyr Ile Thr Ala Val Thr Ala Thr Ser Asn Glu Ile Lys Glu  
 420 425 430  
 Ser Pro Leu His Gly Thr Gln Asn Thr Ile Asn Lys Ser Gly Gly Ser  
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 Thr Thr Val Phe Thr Gly Gln Cys Phe Ile Asp Arg Asn Gly Lys Glu  
 450 455 460  
 Val Leu Lys Thr Met Trp Leu Leu Arg Ser Ser Val Asn Asp Ile Gly  
 465 470 475 480  
 Asp Asp Trp Lys Ala Thr Arg Val Gly Ile Asn Ile Phe Thr Arg Leu  
 485 490 495  
 Arg Thr Gln Lys Glu Gly Gly Ser Gly Gly Ser Ala Arg Lys Cys Ser  
 500 505 510  
 Leu Thr Gly Lys Trp Thr Asn Asp Leu Gly Ser Asn Met Thr Ile Gly  
 515 520 525  
 Ala Val Asn Ser Arg Gly Glu Phe Thr Gly Thr Tyr Ile Thr Ala Val  
 530 535 540  
 Thr Ala Thr Ser Asn Glu Ile Lys Glu Ser Pro Leu His Gly Thr Gln  
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acagccacat caaatgatg caaagagtca ccactgcatg ggacacaaaa caccatcaac 480
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 aacatgacca tcggggctgt gaacagcaga ggtgaattca caggcaccta catcacagcc 780  
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<223> Description of Artificial Sequence: Synthetic primer

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<213> Gallus gallus

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 35 40 45

Cys Phe Ile Asp Arg Asn Gly Lys Glu Val Leu Lys Thr Met Trp Leu  
 50 55 60

Leu Arg Ser Ser Val Asn Asp Ile Gly Asp Asp Trp Lys Ala Thr Arg  
 65 70 75 80

Val Gly Ile Asn Ile Phe Thr Arg Leu Arg Thr Gln Lys Glu Gly Gly  
 85 90 95

Ser Gly Gly Ser Ala Arg Lys Cys Ser Leu Thr Gly Lys Trp Thr Asn  
 100 105 110

Asp Leu Gly Ser Asn Met Thr Ile Gly Ala Val Asn Ser Arg Gly Glu  
 115 120 125

Phe Thr Gly Thr Tyr Ile Thr Ala Val Thr Ala Thr Ser Asn Glu Ile  
 130 135 140

Lys Glu Ser Pro Leu His Gly Thr Gln Asn Thr Ile Asn Lys Ser Gly  
 145 150 155 160

Gly Ser Lys Glu Ser Pro Leu His Gly Thr Gln Asn Thr Ile Asn Lys  
165 170

Arg Thr Gln Pro Thr Phe Gly Phe Thr Val Asn Trp Lys Phe Ser Glu  
180 185 190

Ser Thr Thr Val Phe Thr Gly Gln Cys Phe Ile Asp Arg Asn Gly Lys  
195 200 205

Glu Val Leu Lys Thr Met Trp Leu Leu Arg Ser Ser Val Asn Asp Ile  
210 215 220

Gly Asp Asp Trp Lys Ala Thr Arg Val Gly Ile Asn Ile Phe Thr Arg  
225 230 235 240

Leu Arg Thr Gln Lys Glu Gly Gly Ser Gly Gly Ser Ala Arg Lys Cys  
245 250 255

Ser Leu Thr Gly Lys Trp Thr Asn Asp Leu Gly Ser Asn Met Thr Ile  
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Val Thr  
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